

Report of a special committee of vestrymen on the sanitary condition of St. Pancras Workhouse Infirmary : with which is incorporated a report on the same subject / by Thomas Stevenson.

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Sir Dr. Stevenson.

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Saint Pancras, Middlesex.



REPORT

OF A

SPECIAL COMMITTEE OF VESTRYMEN

ON THE

SANITARY CONDITION

OF

ST. PANCRAS WORKHOUSE INFIRMARY

WITH WHICH IS INCORPORATED

A REPORT

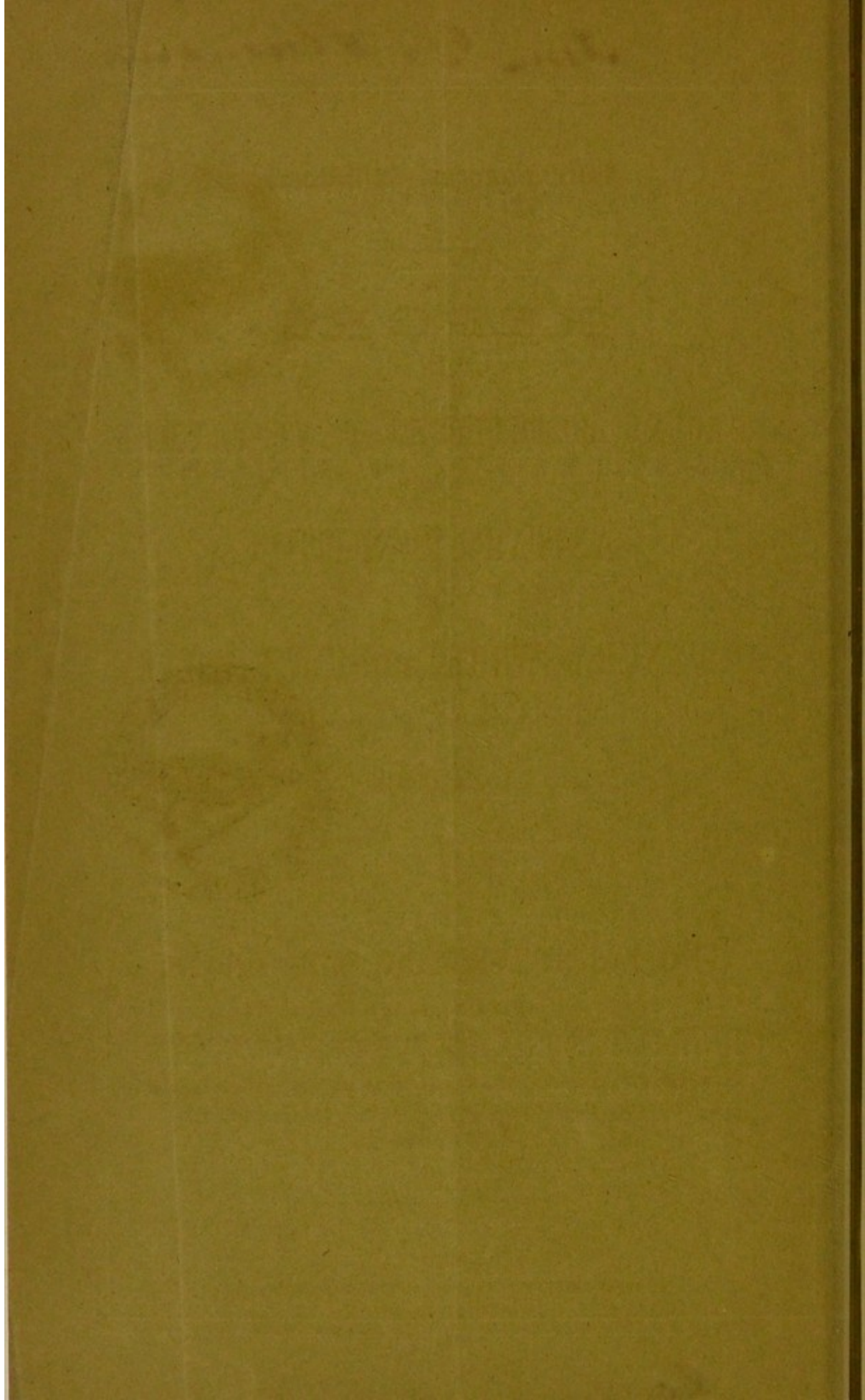
ON THE SAME SUBJECT,

BY

THOMAS STEVENSON, M.D., LOND.,

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS,
LECTURER ON EXPERIMENTAL PHILOSOPHY AND PRACTICAL CHEMISTRY
AT GUY'S HOSPITAL,
EXAMINER IN FORENSIC MEDICINE IN THE UNIVERSITY OF LONDON,
AND MEDICAL OFFICER OF HEALTH FOR THE PARISH OF
SAINT PANCRAS.

See 17



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1869.

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Saint Pancras, Middlesex.

The Special Committee of Vestrymen appointed the 17th November, 1869, met on Monday, the 22nd, and Monday, the 29th November, 1869,

Present—On the 22nd November, 1869,

JOSEPH CLARKE, Esq., M.D., in the Chair,	
Mr. PEARSE, F.R.C.S.,	Mr. RICHARDS,
,, KNAGGS, M.R.C.S.,	,, NEWTON,
,, HOPPEY,	,, JENKINS,
,, McDONAGH, M.R.C.S.,	,, WETENHALL,
And Mr. WELCH.	

Present—On the 29th November, 1869,

F. B. PEARSE, Esq., F.R.C.S., in the Chair.	
Mr. JENKINS,	Mr. McDONAGH, M.R.C.S.,
,, HOPPEY,	,, WELCH,
,, RICHARDS,	,, RANGER,
,, WETENHALL,	Dr. CLARKE,

And Report,—

* * * *

That in pursuance of authority given by the Vestry on the 17th instant, and through the courtesy of the Board of Guardians, your Committee, accompanied by the Medical Officer of Health and the Master of the Workhouse, visited the Infirmary and the Casual Wards of the Workhouse, on Monday,

the 22nd instant, and after a careful examination of the several Wards, it was unanimously agreed that the Medical Officer of Health be instructed to revisit the Workhouse and Infirmary, at such time or times as he might think proper, to examine the Sanitary Condition thereof, and report fully in writing to your Committee.

In accordance with this instruction, your Committee have received the following Report from the Medical Officer:—

ST. PANCRAS, MIDDLESEX.

SANITARY DEPARTMENT,

29th November, 1869.

TO THE SPECIAL COMMITTEE.

Gentlemen,—

In accordance with your resolution of the 22nd inst., I beg to report as follows:—

Confining my remarks at first exclusively to the Infirmary, I have to state that I visited this building on the morning of the 23rd, on the night of the 24th-25th, and on the afternoon of the 25th inst. I also visited it along with the Committee on the afternoon of the 22nd.

The points to which I directed my attention more particularly were—the condition of the Wards as regards cubic space and ventilation; the number of patients in the Wards, and the number of beds, with their relations to cubic space and ventilation; the quality of the air in the Wards at various times, and the purity of its source; the state of the Wards, as regards cleanliness and general sanitary condition; and the sanitary or unsanitary state of the offices.

In accordance with what I presumed to be the wish of the Committee I have given the question of cubic space a very full consideration. This consideration is inseparably associated with that of means of ventilation, and I shall therefore speak of them together. Given a room, almost as small as you please, if that room be constantly supplied with a stream of fresh, pure air, properly warmed, and duly supplied with moisture, a patient may do well in it. On the other hand, in a room, however spacious, with no sufficient means for the renewal of the contained air, a patient

will do badly. Nevertheless practically we are able to assign a minimum of space for the sick which cannot be transgressed without calling in the aid of costly artificial means of warming, moistening, and renewing the atmosphere. The old Poor Law minimum was, I believe, 550 cubic feet for each sick person: this is undoubtedly too little. The New Poor Law limit is 850 feet; which is a fair allowance if the means of ventilation are natural (as by doors, windows, fire-places, and ventilating apertures), and good, and where no artificial means are made use of for renewing the air of the Ward. In this Infirmary the system of ventilation employed is partly natural, partly artificial—natural by means of windows on the louver principle, and fire-places; artificial by means which I shall now describe.

In most of the windows of the several Wards, the lower ledge is provided with an aperture to the air, which may be closed at pleasure by a hinged lid. This serves for the admission of fresh air when the windows are closed. Close to the ceilings of the respective Wards perforated zinc gratings are placed, 11 inches square, communicating with air shafts. These serve for the exit of foul air. In each of the large Wards, of about 30 beds each, there are three such gratings. The air shafts I have mentioned are one foot square, and lead to one large downcast shaft that eventually passes beneath the basement of the building, and communicates by an opening 14 inches square, with the ash-pit of a furnace; whilst it also has a communication with an upcast shaft passing to the top of the building, the draft being aided by the flue of the furnace. Air is thus drawn through the Wards. The furnace is double, so that when one fire is put out at night, the other can be lighted, to keep up the draft in the air-shafts. I have tested the working of this apparatus. It acts well when the ash-pit door is kept closed; but when this is opened but little air is drawn from the Wards. It has been alleged that sewage-water has been taken out of the downcast shaft. I could not satisfy myself as to the correctness or incorrectness of this statement; but, assuming its correctness, the fact loses its importance in a great measure when it is remembered that the foul air passes from the Wards through the shaft into the furnace, and not from the shaft into the Wards. It seems quite unlikely that there could be a reflux of air from the shaft into the Wards, except under the improbable conjuncture of the furnace fire going out, and the windows and ventilating inlets being all closely shut.

This system of ventilation is good ; but three defects mar its usefulness. The management of the ash-pit door appears to be left to the care of a porter who knows little of its use, under the supervision, however, of the Engineer. On two out of four occasions on which I have visited the Infirmary the ash-pit door was open. One of the other defects might be remedied easily and inexpensively ; it is this. The apertures in the window-ledges for the admission of fresh air have no provision for breaking up the incoming cold air and directing it away from the patients' heads. The outlet apertures in the Wards are also too few in number.

The sources from which the Wards obtain their air is threefold—from clean, airy, and well ventilated staircases, by means of doors ; no objection can be made to this source, which is only occasionally made use of—from the external air by means of open windows and ventilating apertures ; and from the water-closets and sculleries. It has been asserted that the external air might be contaminated by a cess-pit, situated at some distance from the building. The attention of the Sanitary Department was never called to the existence of this nuisance till Wednesday last. I have since had it abolished. The smell from the cess-pit, which was situated in the open air on the property of the Midland Railway Company, was very slight, the offensive matters being covered with clay, and thus in great part deodorized. The nearest window is that of No. 7 Ward, about 50 feet distant. In this Ward, when the window was open, no smell of the cess-pit could be detected. All the other Ward windows are at much greater distances from the nuisance, and open in other directions.

The plan of drawing air through the sculleries and water-closets—a plan almost universally adopted in the Infirmary—is radically bad, and ought at once to be abolished. The sculleries have their sinks trapped with syphon traps, and the closets are also trapped and well flushed with water. Only one scullery, with its adjacent water closet, was decidedly offensive, and that was in No. 16 Ward. Some of the others had a faint smell, such as can nearly always be perceived in such offices when they are much used ; they could be “ nosed ” when standing in them, but not in the Wards. The sculleries, of which there are two in each of the larger, and one in each of the smaller Wards open directly into the adjacent Wards, and the communicating door is not self shutting. Out of each scullery a w.c. opens. Nearly all the closets have an

external window, and several of the sculleries have one also. The scullery doors are, as a rule, pierced with round holes* in the upper panels, and many of the closet doors have similar perforations. Nothing could be worse than this arrangement. A current of cold air is constantly streaming into the Wards through the closets and sculleries. Both scullery and w.c. doors should have self-acting springs to close them, and their closure should not be left to the caprice of those passing in and out; the perforations ought to be abolished; and the edges of the doors should be covered with India rubber draft excluders. By these inexpensive modifications, a serious evil might be done away with.

I shall now describe the several Wards, and the state in which I found them, prefacing this description with a tabular statement of their capacities, area of ventilating inlet and outlet, the number of beds, the number of patients, &c. In this table, it will be observed that there are two columns, headed respectively, "No. of beds marked on official card," and "No. of beds painted up in Wards." The card is an official one given me in the Master's office. The number of beds stated on the walls is, except in Wards 3, 5, and 29, greater than the number stated on the card, which is evidently an old one. The aggregate number of beds, as stated on the card, is 187—as painted on the walls, 207. The actual number of beds was 206.

* The Special Committee find that these holes were made in pursuance of the following recommendations, made by Dr. Edward Smith, of the Poor Law Board, in a Report printed by order of the House of Commons, and dated 26th June, 1866,—Dr. Smith says, "Especial attention should be given to the "state of the sculleries and water-closets throughout "the Infirmary, and openings should be made through "the door to the water-closet and to the Wards;" and "The sculleries and water-closets, in order to be "properly ventilated, must not only be in direct "communication with the outer air, but with the "Ward also."

See Report of Dr. Edward Smith, LL.B., F.R.S., Poor Law Inspector, and Medical Officer to the Poor Law Board, on the Metropolitan Workhouse Infirmarys and Sick Wards. Pages 185 and 186.

No. of Ward.	Description of Cases.	No. of Beds marked on Official Card.	No. of Beds painted up in Ward.	No. of Beds actually in Ward.	Greatest number of Patients seen in Wards.	Least No. of Patients seen in Ward.	Contents in cubic feet.	Cubic feet to each Bed.	Cubic feet to each Patient (maximum)	Cubic feet to each Patient (minimum).	Average height of Ward. ft. in.	Floor space in square feet to each Bed.	Area in inches to each Bed of inlets for air, exclusive of windows and doors.	Area of inches of outlets to each Bed for pure air, exclusive of chimneys.
6	Surgical...	24	29	29	24	24	17,320	600	720	720	11 5	53	17	14
11	Medical ...	28	31	31	30	29	20,130	650	700	670	12 5	53	30	16
16	Surgical ...	28	32	32	32	26	20,960	655	800	655	12 5	53	29	12
24	Medical ...	27	30	30	30	30	20,180	670	670	670	11 5	56	32	8
25	Medical ...	6	7	7	7	7	5,060	720	720	720	11 3	68	29	17
5	Itch...	9	9	9	6	6	4,800	535	800	800	11 11	44	14	14
29	Venereal...	12	12	15	13	13	9,760	650	750	750	11 6	52	14	30
3	Itch...	12	12	12	7	7	6,950	580	993	993	11 5	48	19	19
7	Venereal...	10	12	12	7	7	6,260	520	895	895	11 1	47	89	10
27	Ophthalmic ...	11	14	10	12	12	9,580	958	800	800	11 4	67	16	27
15	Children...	8	10	10	13	12	6,700	670	560	515	12 6	54	21	13
4	Helpers' Dormitory ...	12	9	9	0	0	4,670	520	—	—	10 11	45	36	36

Wards 6, 11, 16, and 24.

These contain the majority of beds in the Infirmary, are structurally good, and they are well shaped and tolerably lofty. Nos. 11 and 6 are defective in their having no outlet at their west ends to secure thorough ventilation when required. Nos. 11 and 16 are well lighted; No. 6 and 24 moderately so. The number of beds in each Ward is too great, and might be reduced with advantage; but there is no serious overcrowding. A sufficiency of fresh air can be introduced on calm days into these Wards by the present means of ventilation to keep them sweet; but there is danger of unduly lowering their temperature. To the class of patients in Nos. 6 and 16 (surgical cases, the majority ulcers) coolness, though not coldness of atmosphere is advantageous; but in the Medical Wards, Nos. 11 and 24, as the majority of patients suffer from pulmonary complaints, efficient ventilation cannot be secured in windy weather, and with the beds full, without risk to the patients.

I have pointed out already the defective arrangements of the w.c.'s and sculleries. The gas burnt in these, and indeed in any of the Wards, is too small to exert any material influence on the purity of the atmosphere. In these four Wards there is one jet to about 10,000 cubic feet of space.

No. 25, Female Medical Ward.

Is long and narrow; yet the ventilation appears to be fairly well secured.

No. 5, the Male Itch Ward.

Has fairly good means of ventilation. There are too many beds in this Ward; but only two-thirds of them were filled. The w.c. ventilates only into that of No. 7 Ward.

No. 29, the Female Venereal Ward.

Is cool, airy, and draughty; in fact, unpleasantly so.

No. 3, Female Itch Ward.

Has two defects. There is no w.c. to the Ward, and the window does not open; the only means of ventilation being in the roof. This latter defect might be easily remedied.

No. 7, Male Veneral Ward.

Ought to have some means of ventilation, lower than the sky light, that could not be tampered with by the patients. This might be easily contrived. The number of beds (12) is too great; but only 7 are filled.

No. 27, Ophthalmic Ward for Women & Children.

Is cool, airy, and draughty—too draughty for the class of patients treated in it. I found

No. 15, the Child's Ward.

Satisfactory in the day time, but close and offensive at night. Children with large suppurating surfaces from disease, require very abundant ventilation. I do not consider this Ward well adapted for children, though it might do well for sick adults.

No. 4, the Helper's Bed-room.

Is quite unfit for a sick-room. I don't know whether it has been used as such; at present it is disused. There are no windows, but ventilation is obtained from the sky-light. The stack-pipe from some water-closets passes down the side of the wall; this is very objectionable.

The neat and cleanly state of the Wards calls for great praise. I am unable to form any opinion as to the efficiency of the drainage of the building; this is a question for an engineer to determine.

It has been stated that the Infirmary is infested with rats, and that they gain access into the Wards at night. I think such an occurrence in the highest degree improbable, and I could find no evidence of its occurrence.

The following extracts from notes taken during my visits may guide the Committee in coming to a correct judgment as to the state of the Infirmary.

November 22nd, 1869, 3.15 p.m. till 4.45 p.m. Accompanied the Special Committee to the Infirmary, and visited Wards Nos. 6, 11, 16, 24, 7, 25, and 29. A rainy, gusty day.

No. 11.

Animal odour on entering quite distinct. Temperature 61°. Some of the inlets for air are causing slight draughts on to the beds. 31 beds, 30 patients. Ventilators acting badly.

No. 7.

Smells of stale tobacco only. 12 beds, 7 patients.

No. 16.

Smells of carbolic acid, with a slight animal flavour. 32 beds, all full.

No. 6.

Smell proceeding from a case of extravasion of urine. Ventilating outlets acting badly.

No. 24.

Offensive smell, no doubt in great part due to a case of gangrene of the lung now in the Ward. 30 beds, all full.

No. 25.

No offensive odour. 7 beds, 7 patients.

No. 29.

Airy and sweet. 15 beds, 13 patients.

One w.c. in No. 24 Ward had no water. The outlets for the exit of air from the several Wards into the air-shafts, were found to be acting fitfully and imperfectly. On proceeding to the engine-room, the ash-pit door was found open; therefore the ventilating outlets would necessarily be thrown out of action.

November 23rd, at 10.45 a.m. The ash-pit door in the engine-room was found shut, and the ventilating apparatus, as tested in the Ward, found to be acting well. A calm, fine day. Temperature about 42°.

No. 11.

At 10.30 a.m. Very slight animal odour. Temperature 59°. 3 windows and 8 inlet ventilators open. 2 fires burning. 31 beds, 30 patients. 1 w.c. can be nosed when in it; the other and the two sculleries sweet.

No. 6.

Odour of stale tobacco only. Temperature 58°. 2 windows and 1 inlet ventilator open. 1 fire burning. 29 beds, 24 patients. w.c. and scullery sweet.

No. 7.

Very slight sour odour on entering. 1 window open. 12 beds, 7 patients. w.c. sweet.

No. 5.

Smells of sulphur ointment only. 2 windows open. Fire burning. 9 beds, 6 patients. w.c. sweet.

No. 16.

Smells of carbolic acid. On returning at 1.15 p.m., the smell was partly sour, partly that of carbolic acid. Both times a sewage smell adjoining western w.c. This closet and the adjacent scullery have a highly offensive smell, proceeding only in part from putrid yeast in the scullery; the other w.c. sweet. The second scullery smells of washing. Temperature 52°. 8 windows and 4 inlet ventilators open. 2 fires burning. 32 beds, all full. The ulcerated legs in this Ward appear to be doing well.

No. 24.

Faint smell of oranges. Temperature 55°. 2 windows and 6 inlet ventilators open. 2 fires burning. 30 beds, all full. Very slight smell of drain in one w.c.; more perceptible in the other. 1 scullery has a faint smell of drain; the other has a sour smell, not of drain.

No. 27.

Large quantity of incoming fresh air. Very slight sour smell from children. Temperature 51° . 1 fire burning. 7 children and 5 adults. 10 double and 4 single beds. Large and airy scullery, sweet; in the w.c. beyond, the drain can be just nosed.

No. 25.

No unpleasant odour. 1 window and 2 inlet ventilators open. Temperature 55° . 1 fire burning. 7 beds, all full. w.c. sweet.

No. 29.

Slight smell of carbolic acid only. Abundance of fresh air entering. Fire burning. Temperature 52° . 15 beds, 13 patients. Scullery sweet. w.c. smells of carbolic acid injections.

No. 15.

Slight smell of dinner, which is going on. The Ward receiving abundance of fresh air. 1 fire burning. Sink sweet. Drain can be just nosed in w.c. Temperature 53° . 10 beds, 12 patients.

No. 4.

Is unused. Fæcal matter in pan of water-closet.

No. 3.

Smells of dinner and sulphur ointment only. Fire burning. Sink inside Ward trapped, sweet. No w.c. Ward moderately well ventilated from sky-light.

All the Wards were beautifully clean. The general impression conveyed was much more favorable than on the preceding day. None of the Wards could be said to be offensive, except No. 16, near one w.c. All the closets were well flushed.

November 24—25. Visit from 10 p.m. to 12.30 a.m.

No. 11.

Slight animal odour. Temperature 59°. 4 windows and 8 ventilators open. Night calm and cool. Spasmodic coughing began after I had been in the Ward a short time. 31 beds, 29 patients. Offensive odour of night stool about No. 23 bed. Draught on to patients' heads scarcely perceptible. Visited again 2½ hours later. Ward tolerably sweet. Temperature had fallen 1°.

No. 16.

Smell of carbolic acid (faint) only. 1 window open and draughty; rest shut. 6 inlet ventilators open. Temperature 53°—54°. A few chronic coughs. 1 fire burning, the other out. Foul smelling, dirty linen in one w.c. The other w.c. smells offensively of drain, and so does adjacent part of Ward. 32 beds, 26 patients. An hour later there was a mixed odour of carbolic acid and perspiration; unpleasant, but not highly offensive.

No. 24.

Peculiar odour, not that of perspiration, but perhaps proceeding from gangrene of lung. It is not however penetrating. All windows shut. 6 inlet ventilators open. 2 fires burning. Temperature 56°. 30 beds, all full. Decided smell of scullery at N.W. corner of Ward. A little spasmodic coughing began after a time in the Ward.

No. 25.

Ward sweet; windows shut. 2 inlet ventilators open. Fire burning. No coughing.

No. 29.

Faint smell of carbolic acid only. No coughing. Temperature 52°. Fire burning.

No. 15.

Decided and offensive smell of children's excretions. One ventilator open. Fire dying out. Windows shut. Temperature 54°. 13 children and one nurse sleeping.

No. 27.

Decided smell of cats' urine only. All windows shut. Fire out. One ventilator open. Temperature 54°.

No. 3.

Smells of sulphur ointment only. Ventilators in sky-light open. Temperature 54°. No coughing.

No. 4.

Not used.

No. 6.

Rather close atmosphere, and smell of stale tobacco. One fire burning. Temperature 59°. All the windows shut, and only 1 inlet ventilator open, 17 × 6 in. open. A little coughing. 29 beds, 24 patients.

No. 5.

Smells of sulphur ointment. Both windows open, and curtains pinned in front of them. Fire burning. 9 beds, 6 patients.

No. 7.

Smells of stale tobacco. No smell of perspiration. Window and all the ventilators closed. 12 beds, 7 patients.

At the close of my visit to the Wards, I went to the engine-room, and found the ventilating shaft in full action.

I again visited the Infirmary on the afternoon of the 25th November. In No. 11, ventilation was fairly good. No. 16 was sweet, except near the w.c. at the N.W. corner, where there was a smell of the w.c. drain.

In No. 24 was a faint smell of dinner.

No. 15.

Was fresh and sweet, though it had smelt offensive during the preceding night. The other Wards were not visited on this occasion.

On no occasion were the Wards "beastly," or "highly

offensive." I have made all my visits, except that with the Committee, unexpectedly, having informed no one previously of the time at which I should make my visits. I pursued my investigations without any interference whatsoever on the part of any one.

WORKHOUSE.

I have not had time to make anything like a full inspection of these buildings. I can only speak of the Casual Wards, which I have visited by day and by night: they are excellent, not to say luxurious. I recognize in the plan of giving each inmate a bath, not using the water twice,—an admirable preventive of the spread of disease.

I have the honor to be,

Gentlemen,

Your obedient Servant,

THOMAS STEVENSON,

Medical Officer of Health.

Your Committee having considered and approved of the foregoing Report, submit the same to the Vestry, with a recommendation that it be printed, and a copy sent to each Vestryman; and also that a sufficient number of copies be presented to the Guardians of the Poor, so that one may be sent to each Guardian.

All which your Committee beg to submit.

(Signed) JOSEPH CLARKE,
F. B. PEARSE.

Printed by order of the Vestry,
1st December, 1869.

THOS. ECCLESTON GIBB,
Vestry Clerk.